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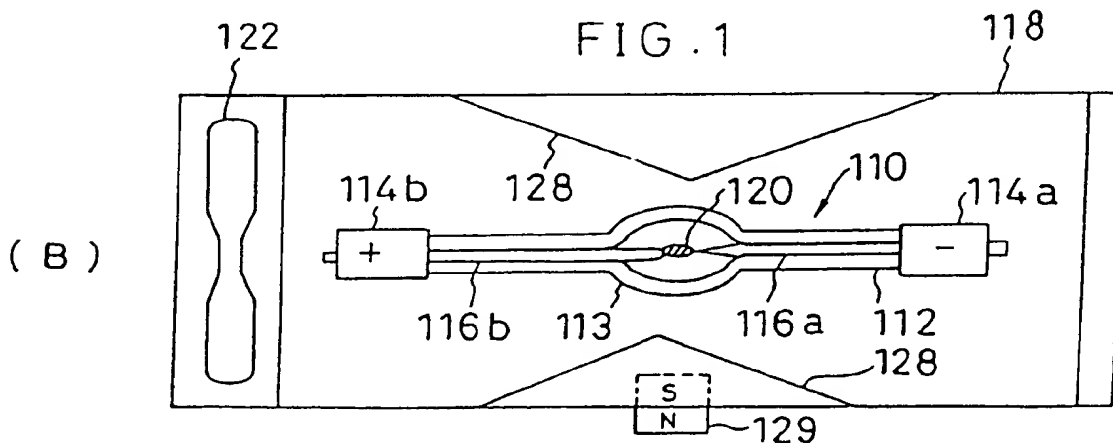
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(54) **Lamp unit and optical analyzer using the same.**

(57) A lamp unit is provided with a projecting portion (128) on the inner wall of a lamphouse (118) in the vicinity of the arc portion (120) of a lamp (110). The lamphouse is ventilated by a fan (122) provided at one end of the lamphouse and a vent (126) provided at the other end. The inner diameter of the lamphouse at the arc portion provided with the projecting portion is smaller than that of the end portions, so that the flow velocity of the air passing through the lamphouse is higher in the vicinity of the arc portion. Even if the lamp (110) is horizontally installed, which lowers the heat dissipation efficiency, since the lamp (110) is adequately air-cooled, an extreme temperature rise is prevented.

Furthermore a magnet is provided in the vicinity of the lamp to stabilize the arc of the horizontal arc lamp. As a bulb material for the lamp, quartz glass having a low transmission below 220nm is used. A cartridge (of e.g. ceramic) permits easy replacement of the lamp unit.





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# EUROPEAN SEARCH REPORT

Application Number  
EP 94 30 5516

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
Y	PATENT ABSTRACTS OF JAPAN vol. 7, no. 67 (P-184) 19 March 1983 & JP-A-57 212 425 (FUJITSU KK) 27 December 1982 * abstract *	1-3,6	G01J3/10 H01J61/82
Y	DE-A-33 23 875 (DEMOLUX GMBH & CO KG) 3 January 1985 * abstract; figures *	1-3,6	
P,Y	DE-A-42 38 731 (B.JÖRNS) 19 May 1994 * column 1, line 30 - line 33 *	1-3,6	
A	EP-A-0 324 652 (GTE PRODUCTS CORPORATION) 19 July 1989 * claims 1,2; figures *	2,3	
A	EP-A-0 502 273 (GENERAL ELECTRIC COMPANY) 9 September 1992 * page 9, line 19 - line 46; figures 9,10 *	2,3	
A	PATENT ABSTRACTS OF JAPAN vol. 14, no. 301 (P-1069) 28 June 1990 & JP-A-02 095 220 (KAWASAKI KAZUHIRO ET AL.) 6 April 1990 * abstract *	7,8	G01J H01J G03B G01N F21V
A	PATENT ABSTRACTS OF JAPAN vol. 14, no. 44 (P-996) 26 January 1990 & JP-A-01 276 023 (MINOLTA CAMERA CO LTD) 6 November 1989 * abstract *	7,8	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 7 March 1995	Examiner Scheu, M
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>			

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### CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claims:
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

### LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions, namely:

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- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



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# EUROPEAN SEARCH REPORT

Application Number  
EP 94 30 5516

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	PATENT ABSTRACTS OF JAPAN vol. 6, no. 53 (P-109) 8 April 1982 & JP-A-56 166 449 (YOKOGAWA HOKUSHIN ELECTRIC CORP) 21 December 1981 * abstract * -----	7, 8	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 7 March 1995	Examiner Scheu, M
<b>CATEGORY OF CITED DOCUMENTS</b> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	

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#### LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims 1-6 : Cooling mechanism for a (short art type) lamp.
2. Claims 7-9 : Lamp replacing mechanism for a lamp in an optical analyzer

